Bangalore Electricity Supply Company Limited
(CIN-U4010KA2002SGC030438)

Ref. No. :BESCOM/D(T)/GM(M&C)/2023-24 /2187
Encl:

Corporate Office,
BESCOM, K.R. Circle,
Bangalore-560 001.
Date: 25/1/2024

Clarification No.-1

Sub: For Procurement of Portable single phase, three phase LT, HT and Universal HT&LT Electronic Reference Standard Meters (Accuchecks)

Ref: 1. Paper Notification dated 30.12.2023.
2. T.O. Bid Enquiry No. BESCOM/GM(M&C)/122/2023-24.
3. KPPP Enquiry No. BESCOM/2023-24/IND0042.
4. Pre-bid meeting held on 09.01.2024.
5. Approval of D(T) dated 25.01.2024.

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The following clarifications pertaining to subject bid enquiry is herewith issued consequent to request from the prospective bidders and deliberations during pre-bid meeting:

Sl. No	As existing Clause No.	Clarifications/amendments sought by the firm	BESCOM Clarifications
1	**Technical specifications LT_Single phase_ERS ACCURACY REQUIREMENT:** For the accuracy certification of test equipment, high frequency pulse output shall be provided on it.	For the accuracy certification of test equipment, LED pulse output/ frequency output shall be provided on it. Accuracy can be tested by either LED Pulse or frequency output. Both are acceptable options.	Both are acceptable
2	**Technical specifications LT_Three phase_ERS** 1.7 CONSTRUCTIONAL AND GENERAL REQUIREMENTS:	RSM meter must be capable to measure Primary and Secondary currents for all 4 CTs simultaneously. RSM meter must be capable to measure Primary and Secondary currents for all 3 Phases (R,Y & B) In BESCOM tender floated in 2020-21 called for 3CTs (R,Y,B) only. Also, nowhere in the technical specification the requirement for measuring neutral current is mandated.	Tender conditions prevail

Sl. No	As existing Clause No.	Clarifications/amendments sought by the firm	BESCOM Clarifications
3	**Technical specifications_LT_Three phase_ERS** 1.13 Type tests	This shall be removed As per IS14697 (Ref - Table 12), "Test of accuracy requirements" is the super set of all other items listed in Clause 1.13. Thus, there is no further requirement to include this as a line item in Clause 1.13.	Type tests OR calibration report is accepted.
4	**Technical specifications_HT_Three phase_ERS** Clause 14 Type tests	This shall be removed As per IS14697 (Ref - Table 12), "Test of accuracy requirements" is the super set of all other items listed in Clause 1.13. Thus, there is no further requirement to include this as a line item in Clause 1.13.	Type tests OR calibration report is accepted.
5	**Three phase_HT_ERS GTP** Sl.No. No.22 IS ELECTRONIC COMPENSATED CLAMP-ON CTs TO ENABLE TESTING WITHOUT ISOLATING OR INTERRUPTING THE SUPPLY OF THE CONSUMER IS PROVIDED	IS CLAMP-ON CTs TO ENABLE TESTING WITHOUT ISOLATING OR INTERRUPTING THE SUPPLY OF THE CONSUMER IS PROVIDED With new technologies in magnetics, CTs have high accuracy and are interchangeable. As long as the CTs are interchangeable, the electronic compensation is not required.	Acceptable
6	**Technical specifications_Combined_HT_LT_ERS** 14.Type tests	This shall be removed As per IS14697 (Ref - Table 12), "Test of accuracy requirements" is the super set of all other items listed in Clause 1.13. Thus, there is no further requirement to include this as a line item in Clause 1.13.	Type tests OR calibration report is accepted.
7	**Combined HT_LT_ERS GTP** Sl.No.22 IS ELECTRONIC COMPENSATED CLAMP-ON CTs TO ENABLE TESTING WITHOUT ISOLATING OR INTERRUPTING THE SUPPLY OF THE CONSUMER IS PROVIDED	IS CLAMP-ON CTs TO ENABLE TESTING WITHOUT ISOLATING OR INTERRUPTING THE SUPPLY OF THE CONSUMER IS PROVIDED With new technologies in magnetics, CTs have high accuracy and are interchangeable. As long as the CTs are interchangeable, the electronic compensation is not required.	Acceptable
8	**PQR:** If the Tenderer is OEM/ authorized dealer of the OEM of the Goods, then the Average Annual Turnover	The bidder turnover should be 30% of amount to put tender to allow MSME company & to promote start up.	Tender conditions prevail

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	of the Tenderer should not be less than the amount put to tender for the last 3 (three) preceding Financial years (i.e. FY 2020-2021, 2021-2022 and 2022-2023). However, it is 50% in the last 2 (two) years with respect to Micro and Small Enterprises.	Such high turnover requirement does not allow to participate new company has advanced technical solution in past tender floated by BESCOM for ERS turnover asked was 30% of amount to put tender in last 5 Year.	
9	Mandatory to quote for all type, 1. LT Single phase – 9 Nos. 2. LT three phase – 14 Nos. 3. HT -16 Nos. 4. Universal HT/LT- 10 Nos.	The bidder should allow to quote any one item also – either single phase or LT CT or HT or universal. As each type of RSM is different, separate QR for each item should be mentioned. Bidder should allow to quote min 40% of Qty and supply requirement shall be as per quoted quantities. This will give better clarity to bidder.	Tender conditions prevail
10	**PQR:** Tenderer should be a manufacturer of the OEM who must have manufactured, tested and supplied latest design as per applicable Standards of HT or LT Electronic Reference Standard meters (accuchecks) of class 0.2 or better accuracy at least 80% of the quantity required in any one of the **last 3 (three)** completed Financial Years (i.e. FY 2020-2021, 2021-2022 and 2022-2023) to any DISCOMs/ Electrical utilities/ Electricity Boards in India.	Supply requirement of last **7 year** should be asked. As ERS warranty itself is 5 Yr while in tender supply experience of only last 3 Yr is considered.	Tender conditions prevail
11	Technical specification need to be reviewed.	As parameter asked does not related to testing and various parameter important related to testing ignored.	Not clear. Hence Tender conditions prevail
12	If the Tenderer is OEM/ authorized dealer of the OEM of the Goods, then the Average Annual Turnover of the Tenderer should not be less than the amount put to tender for the last 3 (three) preceding Financial years (i.e. FY 2020-2021, 2021-2022 and 2022-2023). However, it is 50% in the last 2 (two) years with respect to	In qualifying requirement, request you to amend the turnover requirement as in case if authorized representative of OEM, various apex institute like ERDA, IDEMI place order directly to OEM while bid is participated by authorized Indian representative. The turnover of the bidder should be considered 30% of the amount put to tender in any one of the	Tender conditions prevail

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	Micro and Small Enterprises.	previous five financial year.	
13	Tenderer should be a manufacturer of the OEM who must have manufactured, tested and supplied latest design as per applicable Standards of HT or LT Electronic Reference Standard meters (accuchecks) of class 0.2 or better accuracy at least 80% of the quantity required in any one of the last 3 (three) completed Financial Years (i.e. FY 2020-2021, 2021-2022 and 2022-2023) to any DISCOMs/ Electrical utilities/ Elcctricity Boards in India. OR Tenderer, as authorized dealer of the OEM must have supplied latest design as per applicable Standards of HT or LT Electronic Reference Standard meters (accuchecks) of class 0.2 or better accuracy at least 30% of the quantity required in any one of the last 3 (three) completed Financial Years (i.e. FY 2020-2021, 2021-2022 and 2022-2023) to any DISCOMs/ Electrical utilities/ Electricity Boards in India and must be providing annual maintenance services for the above supplied goods in any one centre in Karnataka for over one year. However, it is 40% in any one of the last 2 (two) years with respect to Micro and Small Enterprises.	In qualifying requirement, past supply requirement is very stringent. We request you to consider last 5 yr past supply experience to power distribution companies, NABL accredited lab for 50% of quoted qty. As tender asked different type of ERS past supply requirement shall be separate for the same the bidder should be allowed to quote any type of ERS with min quoted qty of 40%. The supply and financial criteria should be considered pro rata basis as per quotcd qty.	Tender conditions prevail
14	-	To make ease of operation for field testing, advanced technical feature like wireless scanner, simultaneous testing of active/ reactive/ apparent testing in case of dial test, visual evidence capturing, witness signature like	Tender conditions prevail

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		option should be considered. The RSM data recording facility and manner data recording is asked should be generalized. As present specification seems of supplier specific.	
15	**Three phase_LT_ERS** **Clause no. 1.0 & 1.4** .... accuracy class 0.2s for Clamp on CT Mode – Primary and Secondary, for the current range of Primary 1A to 400A and Secondary 50 mA to Maximum 10A at site as well as in Laboratory both for active and reactive energy. Clause no. 1.17 Two set of ....Class 0.2S....with 400A clamp on CT	The accuracy class of 400A CT Shall be amended to Class 0.5S. Another CT shall be asked for 80A. It shall be noted that the clamp on CT of 400A is asked to test in primary side of the installation. Whereas the total accuracy class will become class 1.0 (0.5 for LT CT and 0.5 for energy meter) as per the IS12346 it is asked one higher class (i.e. Class 0.5) is sufficient to test this installation. The requirement from BESCOM tender specification is omitting from the requirement mentioned in relevant Indian standard IS12346 which is limiting the competition in the bid. We are not able to understand the requirement of another CT up to 10A only whereas Single phase Meters can't be tested with this current rating. It shall be asked for at least up to 80A.	Tender conditions prevail
16	**Three phase_LT_ERS** **Clause 1.7** ... clause no. 1.8 shall be obtained by Wireless colour display. Thin film Transistor LCD. Clause 1.8 ....Wireless interface display, connected.... Clause no. 1.9 ...Wireless display of the reference standard shall be of Color 8 inch Touch screen with high resolution and suitable screen with device protection. Screen shall have size of 8" or above to view all	Wireless & Touch display & Bluetooth device shall be deleted. The asked specification is limiting the competition. Wireless display is not adding any value addition to Equipment's metrological properties. It shall be noted that asked android based system requires frequent updation which will lead to conflict in hardware configuration of system.	Tender conditions prevail

Sl. No	As existing Clause No.	Clarifications/amendments sought by the firm	BESCOM Clarifications
	relevant parameters in one screen. Clause no. 1.17 ....on touch display... Wireless TAB/ Handy Laptop/(if provided) should be of TFT Color Display with Bluetooth interface.		
17	**Three phase_LT_ERS** **Clause 1.7** Auto measuring range shall be provided & switching between ranges should not affect the measurement.	Auto measuring range shall be provided. Ranges are selected to optimizing the accuracy hence desirable that range shall not change during testing.	Tender conditions prevail
18	**Three phase_LT_ERS** **Clause no. 1.4** Capable of Performing the Accuracy on both primary and secondary currents simultaneously in CT operated meters. Capable of giving the error at both ends of the connections i.e., Primary and secondary side. Capable of verifying the CT Ratio-MF, identifying VT Ratio error, Phase angle difference. Clause 1.7 ERS Meter must be capable to measure Primary& secondary current for all 4 CTs Simultaneously	Shall be deleted These asked parameters are related to particular manufacturer make. It shall be specified the testing shall be conducted as per which standard. Since as per the requirement of standard IS3156 and IS2705 the Ratio and phase errors to be performed 80% 100% and 120% load for PT and 1%, 2%, 5%, 10%, 20%, 50% 100% 120% load for CT. How to obtain such load points. Also all of these testing to be perform on 25% and 100% of rated burden of CT and PT. how to obtain such load in the field. Please suggest.	Tender conditions prevail
19	**Three phase_LT_ERS** Clause no. 1.17 ID of clamp CT- Primary- 50 mm, Secondary-8mm.	Primary & secondary word shall be deleted & Dia. should be 52 mm & 12 mm asked Dia. 50 mm & 8 mm should not be restricted. It also may be noted that to accommodate 50 mm cable the bigger CT dia is required. Hence minimum 52 mm shall be asked.	Will be considered
20	**Three phase_ERS** Clause no. 1.22 WIRELESS TAB/ HANDY LAPTOP DISPLAY DEVICE	Shall be deleted For data downloading, PC system with Printer are sufficient.	Tender conditions prevail

Sl. No	As existing Clause No.	Clarifications/amendments sought by the firm	BESCOM Clarifications
	AND PRINTER SPECIFICATIONS:	Separate portable devices shall be misplaced / misused and Guarantee will not be applicable as per clause no. 1.19 in this case.	
21	**Three phase_LT_ERS** No existing clause	Voltage accuracy : 0.05% Current accuracy: 0.15% clamp on CT For the asked voltage and current range. It may be noted that the accuracy of basic parameters also must be defined to get desired accuracy of 0.2% in power and energy since it is derived quantity from voltage and current. It shall be reviewed and amended accordingly. It is must otherwise the metrological properties of device can't be ascertain.	Tender conditions prevail
22	**Three phase_HT_ERS** Clause 8 Constructional features and general requirements All the display parameters indicated in clause no. 9 shall be obtained by wireless color display..... **Clause 9** Display The accucheck should have wireless display. The wireless display of reference standard shall be of color touch screen .... **Clause No. 18** Accessories Wireless Tab/ Handy laptop/ In built display (if provided) should be of TFT Display with Bluetooth device. **Clause 23** WIRELESS TAB/ HANDY	Wireless color display & Wireless communication / interface & Blue tooth shall be deleted. For the field testing purpose, equipment should have inbuilt display with inbuilt key pad. Wireless display is just only the fancy feature, asking this feature is limiting the competition. Please note that inbuilt type display is very sturdy and wireless display having too much problematic, fragile and not user-friendly for field testing purpose. Shall be deleted Shall be deleted	Tender conditions prevail

Sl. No	As existing Clause No.	Clarifications/amendments sought by the firm	BESCOM Clarifications
	LAPTOP DISPLAY DEVICE AND PRINTER SPECIFICATIONS	Shall be deleted For the field testing purpose, equipment should have inbuilt display with inbuilt Keypad. Wireless display is just only the fancy feature, asking this feature is limiting the competition. Please note that inbuilt type display is very sturdy and wireless display having too much problematic, fragile and not user-friendly for field testing purpose. For data downloading, PC system with Printer are sufficient. Separate portable devices shall be misplaced / misused and Guarantee will not be applicable as per clause no. 20 in this case.	
23	**Three phase_HT_ERS** **Clause 8** Constructional features and general requirements ... Use of auxiliary supply is not acceptable for both laboratory and field testing conditions... Dial Test facility must be available by using optical port available in the meter of DLMS protocol. ... type tested for IP51 degree... The ERS meter shall have facility to store minimum 32000 test results..	Shall be deleted. To power up the equipment in the office auxiliary supply required. Optical port shall be deleted. Please note that some of the meters are available with DLMS and some are available without DLMS, hence dial test facility should be asked by manually entering in the reference meter shall be asked. Shall be deleted. It is depend on design of manufacture. However degree of protection should be sufficient as per the field testing purpose in Indian environment conditions. ..to store minimum 1000 test results.... 1000 nos. of test results storing capacity are more than sufficient.	Tender conditions prevail Tender conditions prevail Deleted, Amendment issued. Storage capacity of minimum **12,000** test results- Amendment issued
24	**Three phase_HT_ERS** **Clause 9** Display	On sticker is also acceptable. We understand, sticker on the	Tender conditions prevail

Sl. No	As existing Clause No.	Clarifications/amendments sought by the firm	BESCOM Clarifications
	Sr. No 27 of Table Calibration date of equipment and calibration due. Sr. No 28 of Table RYB phase - Voltage and current up to 51st Harmonics	equipment is also acceptable to indicate calibration date and due date up to 31st Harmonics. 51st Harmonic is contradictory with Cl. No.8 – harmonic measurement up to 31st. Hence 31st shall be asked, which is more than sufficient.	
25	**Three phase_HT_ERS Clause 18** Optical probe for DLMS Dial test ID of clamp CT- Primary- 50 mm, Secondary-8mm.	This clause shall be deleted Please note that some of the meters are available with DLMS and some are available without DLMS, hence dial test facility should be asked by manually entering in the reference meter shall be asked. Primary & secondary word shall be deleted & Dia. should be 12 mm asked. Two separate CT has been asked, hence Primary & secondary word shall be deleted & 8 mm should not be restricted.	Tender conditions prevail **Clarification:** ID of clamp CT-Primary- 50 mm, Secondary-8mm or 12mm shall be considered.
26	Technical Specifications_Single phase _ERS Clause i ACCURACY REQUIREMENT ... 0.2s with Clamp on CT...	0.2s with clamp on CT should be for Active and Reactive mode both. 0.2s should be for Active & Reactive measurement both, since for solar meter testing reactive measurement is also available.	Acceptable

All other terms & conditions of the subject tender remain unaltered.

(Yogesh.B.K)
General Manager (Ele.),
Meters & Commercial
BESCOM